Refine Search

Search Results -

Term	Documents
@PD	37922541
(18 AND (@PD > "20061027")).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	0
(L18 AND @PD > 20061027).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	0

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L19

Database:

Recall Text Clear Interrupt

Refine Search

Search History

DATE: Friday, October 27, 2006 Purge Queries Printable Copy Create Case

Set Name side by side	Query	<u>Hit</u> Count	Set Name result set
DB=	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
<u>L19</u>	L18 and @pd > 20061027	0	<u>L19</u>
<u>L18</u>	L17 and L15	10	<u>L18</u>
<u>L17</u>	L14 and L13	11163	<u>L17</u>
<u>L16</u>	L15 and @pd > 20061027	0	<u>L16</u>
<u>L15</u>	L14 and (balanc\$4 near cable)	19	<u>L15</u>
<u>L14</u>	(magnetic adj resonance or mri or nmr)	238137	<u>L14</u>
<u>L13</u>	(324/300 324/301 324/302 324/303 324/304 324/305 324/306 324/307 324/308 324/309 324/310 324/311 324/312 324/313 324/314 324/315 324/316 324/317 324/318 324/319 324/320 324/321 324/322 or 600/117	14746	<u>L13</u>

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	600/407 600/408 600/409 600/410 600/411 600/412 600/413 600/414 600/415 600/416 600/417 600/418 600/419 600/420 600/421 600/422 600/423 600/424).ccls.		
<u>L12</u>	L11 and (balanc\$4 near cable)	19	<u>L12</u>
<u>L11</u>	(magnetic adj resonance or mri or nmr)	238137	<u>L11</u>
<u>L10</u>	(324/300 324/301 324/302 324/303 324/304 324/305 324/306 324/307 324/308 324/309 324/310 324/311 324/312 324/313 324/314 324/315 324/316 324/317 324/318 324/319 324/320 324/321 324/322 or 600/117 600/407 600/408 600/409 600/410 600/411 600/412 600/413 600/414 600/415 600/416 600/417 600/418 600/419 600/420 600/421 600/422 600/423 600/424).ccls.	14746	<u>L10</u>
<u>L9</u>	L8 and L6	10	<u>L9</u>
<u>L8</u>	L5 and L4	11163	<u>L8</u>
<u>L7</u>	L6 and @pd > 20061027	0	<u>L7</u>
<u>L6</u>	L5 and (balanc\$4 near cable)	19	<u>L6</u>
<u>L5</u>	(magnetic adj resonance or mri or nmr)	238137	<u>L5</u>
<u>L4</u>	(324/300 324/301 324/302 324/303 324/304 324/305 324/306 324/307 324/308 324/309 324/310 324/311 324/312 324/313 324/314 324/315 324/316 324/317 324/318 324/319 324/320 324/321 324/322 or 600/117 600/407 600/408 600/409 600/410 600/411 600/412 600/413 600/414 600/415 600/416 600/417 600/418 600/419 600/420 600/421 600/422 600/423 600/424).ccls.	14746	<u>L4</u>
<u>L3</u>	L2 and (balanc\$4 near cable)	19	<u>L3</u>
<u>L2</u>	(magnetic adj resonance or mri or nmr)	238137	<u>L2</u>
<u>L1</u>	(324/300-322 or 600/117,407-424).ccls.	14746	<u>L1</u>

END OF SEARCH HISTORY

Create A Case

Select	Database	Query	Plural	Op Thesaurus	Set Name
V	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD	424).ccls.	YES	ADJ .	Ll
V	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD	(magnetic adj Presonance or mri or nmr)	YES	ADJ	L2
V	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBE	I 2 and (halanc\$4	YES	ADJ	L3
V	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBE	324/322 of 600/11/ 600/407 600/408 600/409 600/410 600/411 600/412 600/413 600/414 600/415 600/416 600/417 600/418 600/419 600/420 600/421 600/422 600/423 600/424).ccls.	,YES	ADJ .	L4
v	. PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD	(magnetic adj Presonance or mri or nmr)	YES	ADJ	L5
☑ .	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBE	L5 and (balanc\$4 near cable)	YES	ADJ	L6
$\overline{\mathbf{v}}$	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD	L6 and @pd >	YES	ADJ	L7
v	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD		YES		L8
V	PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD	DL8 and L6	YES	ADJ .	L9

Please enter the case name: 511_957_10

Hit List

First Hit Clear Generate Collection Print Fwd Refs Bkwd Refs

Generate OACS

Search Results - Record(s) 1 through 10 of 10 returned.

☐ 1. Document ID: US 6766185 B2 Rele

Relevance Rank: 82

L9: Entry 6 of 10

File: USPT

Jul 20, 2004

US-PAT-NO: 6766185

DOCUMENT-IDENTIFIER: US 6766185 B2

TITLE: Transmission line techniques for MRI catheter coil miniaturization and

tuning

DATE-ISSUED: July 20, 2004

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Scott; Greig C. Palo Alto CA

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

The Board of Trustees of the Leland Palo Stanford Junior University Alto

APPL-NO: 09/863797 [PALM]

DATE FILED: May 22, 2001

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is cross-referenced to and claims priority from U.S. Provisional application 60/206,458 filed May 22, 2000, which is hereby incorporated by reference.

INT-CL-ISSUED: [07] A61B 5/055

DATE

INT-CL-CURRENT:

TYPE IPC

CIPN <u>G01</u> <u>R</u> <u>33/32</u> 20060101

CIPN G01 R 33/36 20060101

CIPS G01 R 33/28 20060101

CIPN <u>A61</u> <u>B</u> <u>5/055</u> 20060101

US-CL-ISSUED: 600/410; 600/423, 324/318, 324/322, 29/828 US-CL-CURRENT: 600/410; 29/828, 324/318, 324/322, 600/423

FIELD-OF-CLASSIFICATION-SEARCH: 600/422, 600/423, 600/410, 324/318, 324/322,

Jan 31, 2002

29/825, 29/828, 29/832 See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4881034	November 1989	Kaufman et al.	324/318
5347221	September 1994	Rubinson	324/318
5432451	July 1995	McGill et al.	324/322
6263229	July 2001	Atalar et al.	600/423
6437569	August 2002	Minkoff et al.	324/318

ART-UNIT: 3737

PRIMARY-EXAMINER: Smith; Ruth S.

ATTY-AGENT-FIRM: Lumen Intellectual Property Services, Inc.

ABSTRACT:

A device and method with miniature and tunable MRI receiver coil for catheters is provided that can be used in minimally invasive procedures and intravascular imaging. An MRI receiver coil for catheter procedures is provided having an impedance matching element that includes at least one miniature transmission line cable which are interconnected to construct the impedance matching element. In a particular embodiment, the miniature transmission line cables are constructed to make an inductance matching element defining an inductance L. In another particular embodiment, the miniature transmission line cable is a capacitance matching element defining a capacitance C. The present invention provides a system and method that allows local fine-tuning with a higher signal-to-noise ratio. Transmission line cables also overcome the minimum size limits of fixed components. The shielded and balance techniques further reduce noise and improve safety.

34 Claims, 11 Drawing figures

	EMB.	Titl	e	Review Classification Dat	a Reference: Claim	s Nuc Disorb
		2.	Document ID:	US 20020013525 A1	Relevance Rank: 82	
•						

File: PGPB

PGPUB-DOCUMENT-NUMBER: 20020013525

PGPUB-FILING-TYPE: new

L9: Entry 3 of 10

DOCUMENT-IDENTIFIER: US 20020013525 A1

TITLE: Transmission line techniques for MRI catheter coil miniaturization and

tuning

Record List Display Page 6 of 17

ATTY-AGENT-FIRM: Della Penna; Michael A. Armstrong Teasdale LLP

ABSTRACT:

A partially parallel acquisition RF coil array for imaging a human head includes at least a first, a second and a third loop coil adapted to be arranged circumambiently about the lower portion of the head; and at least a forth, a fifth and a sixth coil adapted to be conformably arranged about the summit of the head. A partially parallel acquisition RF coil array for imaging a human head includes at least a first, a second, a third and a fourth loop coil adapted to be arranged circumambiently about the lower portion of the head; and at least a first and a second Figure-8 or saddle coil adapted to be conformably arranged about the summit of the head.

20 Claims, 25 Drawing figures

Full	le Citation Front R	evient Classification Da	te Reference		aims 10000 Draw De
***********************			************************************	***************************************	***************************************
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Dec 13, 2005

☐ 4. Document ID: US 6975115 B1 Relevance Rank: 82

L9: Entry 4 of 10 File: USPT

US-PAT-NO: 6975115

DOCUMENT-IDENTIFIER: US 6975115 B1

TITLE: Coil arrays for parallel imaging in magnetic resonance imaging

DATE-ISSUED: December 13, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Fujita; Hiroyuki	Highland Heights	ОН			
Chan; Pei H.	Aurora	ОН			
Chu; Dashen	Hudson	OH			
Murphy-Boesch; Joseph	Aurora	ОН		•	
Petropoulos; Labros S.	Solon	ОН			
Zou; Mark Xueming	Aurora	ОН			

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

GE Medical Systems Global Technology
Waukesha WI
02

Company, LLC Waukesha WI

APPL-NO: 10/164664 [PALM]
DATE FILED: June 7, 2002

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION This application claims the benefit of U.S. provisional patent application Ser. No. 60/296,885 filed Jun. 8, 2001.

Record List Display Page 8 of 17

J. Pelc, Magnetic Resonance in Medicine 45:1103-1111 (2001).

ART-UNIT: 2859

PRIMARY-EXAMINER: Shrivastav; Brij B.

ATTY-AGENT-FIRM: Horton, Esq.; Carl B. Armstrong Teasdale LLP

ABSTRACT:

A partially parallel acquisition RF coil array for imaging a sample includes at least a first, a second and a third coil adapted to be arranged circumambiently about the sample and to provide both contrast data and spatial phase encoding data.

/

20 Claims, 21 Drawing figures

Claims NAC: Classification | Front | Review | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Claims | NAC: | Classification | Icate | Reference | Reference | Classification | Icate | Reference | Re

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040236209

PGPUB-FILING-TYPE: new

L9: Entry 2 of 10

DOCUMENT-IDENTIFIER: US 20040236209 A1

TITLE: System and method of obtaining images and spectra of intracavity structures using 3.0 tesla magnetic <u>resonance</u> systems

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY

Misic, George J. Allison Park PA US Rhinehart, Edward J. Monroeville PA US

APPL-NO: 10/483945 [PALM]
DATE FILED: January 15, 2004

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/381727, filed May 16, 2002,

Application is a non-provisional-of-provisional application 60/429257, filed November 26, 2002,

PCT-DATA:

DATE-FILED APPL-NO PUB-NO PUB-DATE 371-DATE 102(E)-DATE

Mar 13, 2003 PCT/US03/07774

INT-CL-PUBLISHED: [07] A61B 5/055

INT-CL-CURRENT:

TYPE IPC DATE

CIPS G01 R 33/32 20060101 CIPS G01 R 33/36 20060101 CIPS G01 R 33/28 20060101

US-CL-PUBLISHED: 600/423 US-CL-CURRENT: 600/423

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

An MR system features an intracavity probe and associated interface device. The probe includes a shaft, a balloon at one end thereof, and a coil loop within the balloon. The loop has two drive capacitors and a tuning capacitor, all of which in series. A junction node between the drive capacitors serves as a ground for electrically balancing the loop. Diametrically opposite the node, the tuning capacitor enables the loop to resonate at the operating frequency of the MR system. The interface allows the MR system to couple the loop to a port of the MR system during a receive cycle thereof and decouple it from the port during a transmit cycle thereof. With its balloon inserted and inflated within a cavity of a patient, the probe allows the MR system to generate images and/or spectra of the region of interest using the MR signals received by the loop.

CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This application claims the benefit of U.S. Provisional Applications 60/429,257 and 60/381,727, titled System And Method Of Obtaining Images And Spectra Of Intracavity Structures Using 3.0 Tesla Magnetic Resonance Systems and 3.0 Tesla Endorectal Coil And Interface For Single Receiver And Phased Array MR Scanning Of The Prostate And Other Pelvic Anatomy, respectively, filed on Nov. 26, 2002, and May 16, 2002, respectively. These provisional applications have been assigned to the assignee of the invention disclosed below, and their teachings are incorporated into this document by reference.

SEUR STI	≊ Citation Front	Review Classification	Date Refere	nce Sequences	Attachmenta Clai	ms KWWC Draw De
6.	Document ID:	US 20060164089	A1 Rel	evance Rank		

File: PGPB

Jul 27, 2006

PGPUB-DOCUMENT-NUMBER: 20060164089

PGPUB-FILING-TYPE:

L9: Entry 1 of 10

DOCUMENT-IDENTIFIER: US 20060164089 A1

TITLE: Magnetic resonance imaging receive circuit

PUBLICATION-DATE: July 27, 2006

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY

Record List Display Page 10 of 17

Gross; Patrick London GB

APPL-NO: 10/511957 [PALM]
DATE FILED: April 29, 2003

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO DOC-ID APPL-DATE

GB 0209756.6 2002GB-0209756.6 April 29, 2002

PCT-DATA:

DATE-FILED APPL-NO PUB-NO PUB-DATE 371-DATE

Apr 29, 2003 PCT/GB03/01892 Jul 19, 2005

INT-CL-PUBLISHED:

TYPE IPC DATE IPC-OLD IPCP G01V3/00 20060101 G01V003/00

INT-CL-CURRENT:

TYPE IPC DATE
CIPP G01 V 3/00 20060101

US-CL-PUBLISHED: 324/322 US-CL-CURRENT: 324/322

ABSTRACT:

A <u>magnetic resonance</u> imaging receive circuit, for use e.g. within the body of a patient during an MR imaging procedure, includes a balanced MR coil (50) connected to balanced matching and decoupling circuitry (110, 120). Signal transfer passes along two micro-coaxial cables (52, 54) to signal combination circuitry (300) with common mode rejection. Signals then pass along a further coaxial cable (82), to a receiver. The coil (50) may be incorporated into an endoscope or catheter probe, so providing detailed MR imaging of the treatment area.

Full Title Citation	Front Review Classificati	ion Date Reference Sequence	es Attachmente Claim	s KNAC Drave De

☐ 7. Document ID: US 5280248 A Relevance Rank: 81

L9: Entry 8 of 10 File: USPT Jan 18, 1994

US-PAT-NO: 5280248

DOCUMENT-IDENTIFIER: US 5280248 A

TITLE: Biplanar RF coil for magnetic resonance imaging systems

DATE-ISSUED: January 18, 1994

INVENTOR-INFORMATION:

Record List Display Page 12 of 17

ART-UNIT: 267

PRIMARY-EXAMINER: Arana; Louis

ATTY-AGENT-FIRM: Fay, Sharpe, Beall, Fagan, Minnich & McKee

ABSTRACT:

A superconducting magnet (10) generates a uniform, static magnetic field through a central bore (12) along its longitudinal or z-axis. A biplanar gradient coil assembly (44) is inserted into the bore to create gradients across the static magnetic field along orthogonal x, y, and z-axes. A biplanar radio frequency coil assembly (50, 80) is inserted into the bore for transmitting radio frequency signals into a subject and receiving magnetic resonance signals from the subject. The radio frequency coil includes a first biplanar coil assembly (50) for generating RF signals in an x-direction and a second biplanar coil assembly (80) for generating RF signals in a y-direction. The two biplanar coil assemblies each include a plurality of conductors (52, 82) along a first plane and a second plurality of conductors (54, 84) along a parallel second plane. The conductors extend parallel to the z-direction. Capacitors (56, 58, 94) are connected in series with each of the conductors in order to control the current flow such that the current flow in each plane is uniform across the plane. The ends of the electrical conductors are connected together (66, 88) such that the current flows are equal and opposite in the two planes. A radio frequency transmitter (136) transmits RF signals to the quadrature biplanar coil assembly. A digital receiver (140) receives and demodulates radio frequency signals from the quadrature coil assembly. The demodulated signals are reconstructed (144) into an image representation for display on a video monitor (146).

16 Claims, 5 Drawing figures

Full Titl	e Citation Front Review	Classification Date	Reference	Jaims KMCC Drave De
□ 8.	Document ID: US 4	691163 A Rele	evance Rank: .80	

File: USPT

Sep 1, 1987

US-PAT-NO: 4691163

L9: Entry 10 of 10

DOCUMENT-IDENTIFIER: US 4691163 A

TITLE: Dual frequency surface probes

DATE-ISSUED: September 1, 1987

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Blass; Judd Haifa IL Keren; Hanan Haifa IL

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Record List Display Page 14 of 17

tuned between frequency settings and without being effected by the impedance variations that are caused by the different samples or patients.

14 Claims, 9 Drawing figures

9. Document ID: US 6002256 A Relevance Rank: 80

L9: Entry 7 of 10 File: USPT Dec 14, 1999

US-PAT-NO: 6002256

DOCUMENT-IDENTIFIER: US 6002256 A

TITLE: RF magnetic field pulse generator

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Slade; Robert Andrew Oxon GB

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Oxford Instruments (UK) Ltd. Oxford GB 03

APPL-NO: 08/860234 [PALM]
DATE FILED: June 3, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO APPL-DATE

GB 9520357 October 5, 1995

PCT-DATA:

APPL-NO DATE-FILED PUB-NO PUB-DATE 371-DATE

PCT/GB96/02427 October 3, 1996 W097/13159 Apr 10, 1997 Jun 3, 1997

INT-CL-ISSUED: [06] G01V 3/02

INT-CL-CURRENT:

TYPE IPC DATE

CIPS <u>G01</u> <u>R</u> <u>33/36</u> 20060101

CIPS <u>G01</u> <u>R</u> <u>33/32</u> 20060101

US-CL-ISSUED: 324/322; 324/318, 324/320 US-CL-CURRENT: 324/322; 324/318, 324/320

FIELD-OF-CLASSIFICATION-SEARCH: 324/300-319, 324/320-322, 315/501, 128/653, 323/282

Record List Display

Full Title Citation Front Review Classification Date Reference Claims P.M.C. Djaceto.

☐ 10. Document ID: US 4887039 A Relevance Rank: 80

L9: Entry 9 of 10

File: USPT

Dec 12, 1989 .

US-PAT-NO: 4887039

DOCUMENT-IDENTIFIER: US 4887039 A

TITLE: Method for providing multiple coaxial cable connections to a radio-frequency

antenna without baluns

DATE-ISSUED: December 12, 1989

INVENTOR-INFORMATION:

ZIP CODE NAME CITY STATE COUNTRY

Roemer; Peter B. Schenectady NY Edelstein; William A. Schenectady NY Hayes; Cecil E. Wauwatosa WI Eash; Matthew G. Oconomowoc WI

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

General Electric Company Schenectady 02

APPL-NO: 07/288668 [PALM] DATE FILED: December 22, 1988

INT-CL-ISSUED: [04] G01R 33/20

INT-CL-CURRENT:

TYPE IPC DATE CIPS G01 R 33/32 20060101 CIPS <u>G01</u> <u>R</u> <u>33/34</u> 20060101 CIPS G01 R 33/36 20060101

US-CL-ISSUED: 324/322; 324/318 US-CL-CURRENT: 324/322; 324/318

FIELD-OF-CLASSIFICATION-SEARCH: 324/307, 324/318, 324/322, 343/742, 343/743,

343/744, 343/896

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Record List Display Page 17 of 17

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4680548	July 1987	Edelstein et al.	324/318
4692705	September 1987	Hayes	324/318
4740752	April 1988	Arakawa et al.	324/318
4752736	June 1988	Arakawa et al.	324/318
4782298	November 1988	Arakawa et al.	324/318
4820987	April 1989	Mens	324/322

ART-UNIT: 265

PRIMARY-EXAMINER: Tokar; Michael J.

ASSISTANT-EXAMINER: O'Shea; Kevin D.

ATTY-AGENT-FIRM: Krauss; Geoffrey H. Davis, Jr.; James C. Snyder; Marvin

ABSTRACT:

A method for providing plural coaxial cable connections, each to a different portion of a single radio-frequency (RF) antenna without requiring the use of isolation means at any RF connection, determines at least a point within the antenna having a desired common potential adjacent to each of the different portions to which one of the coaxial cable connections is to be made; Then forms a separate segment of each different portion which is located substantially at the common potential and is reactively separated from adjacent segments of the associated portion; and connects a shield conductor of an associated coaxial cable to the separate segment, while connecting a center conductor of that same associated coaxial cable to a selected one of the adjacent segments of that different portion.

20 Claims, 6 Drawing figures

Fille Citation Front Review Classification Date Reference	Glaims (10)
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Term	Documents
(6 AND 8).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	10

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Previous Page Next Page Go to Doc#

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Search Results - Record(s) 1 through 19 of 19 returned.

☐ 1. Document ID: US 6766185 B2 Relevance Rank: 81

L3: Entry 11 of 19 File: USPT Jul 20, 2004

US-PAT-NO: 6766185

DOCUMENT-IDENTIFIER: US 6766185 B2

TITLE: Transmission line techniques for MRI catheter coil miniaturization and

tuning

DATE-ISSUED: July 20, 2004

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Scott; Greig C. Palo Alto CA

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

The Board of Trustees of the Leland Palo CA 02

Stanford Junior University Alto

APPL-NO: 09/863797 [PALM] DATE FILED: May 22, 2001

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is cross-referenced to and claims priority from U.S. Provisional application 60/206,458 filed May 22, 2000, which is hereby incorporated by reference.

INT-CL-ISSUED: [07] A61B 5/055

INT-CL-CURRENT:

TYPE IPC DATE CIPN G01 R 33/32 20060101 CIPN G01 R 33/36 20060101 CIPS G01 R 33/28 20060101

CIPN A61 B 5/055 20060101

US-CL-ISSUED: 600/410; 600/423, 324/318, 324/322, 29/828 US-CL-CURRENT: 600/410; 29/828, 324/318, 324/322, 600/423

FIELD-OF-CLASSIFICATION-SEARCH: 600/422, 600/423, 600/410, 324/318, 324/322,

Record List Display Page 2 of 37

29/825, 29/828, 29/832 See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4881034	November 1989	Kaufman et al.	324/318
5347221	September 1994	Rubinson	324/318
5432451	July 1995	McGill et al.	324/322
6263229	July 2001	Atalar et al.	600/423
6437569	August 2002	Minkoff et al.	324/318

ART-UNIT: 3737

PRIMARY-EXAMINER: Smith; Ruth S.

ATTY-AGENT-FIRM: Lumen Intellectual Property Services, Inc.

ABSTRACT:

A device and method with miniature and tunable MRI receiver coil for catheters is provided that can be used in minimally invasive procedures and intravascular imaging. An MRI receiver coil for catheter procedures is provided having an impedance matching element that includes at least one miniature transmission line cable which are interconnected to construct the impedance matching element. In a particular embodiment, the miniature transmission line cables are constructed to make an inductance matching element defining an inductance L. In another particular embodiment, the miniature transmission line cable is a capacitance matching element defining a capacitance C. The present invention provides a system and method that allows local fine-tuning with a higher signal-to-noise ratio. Transmission line cables also overcome the minimum size limits of fixed components. The shielded and balance techniques further reduce noise and improve safety.

34 Claims, 11 Drawing figures

FUI	Titl	≘ Citation Front	Review Classification Date	Zierense	
	2.	Document ID:		Relevance Rank: 81	

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013525

PGPUB-FILING-TYPE: new

L3: Entry 7 of 19

DOCUMENT-IDENTIFIER: US 20020013525 A1

TITLE: Transmission line techniques for MRI catheter coil miniaturization and

tuning

Record List Display Page 5 of 37

4752736	June 1988	Arakawa et al.	324/318
4782298	November 1988	Arakawa et al.	324/318
4820987	April 1989	Mens	324/322

ART-UNIT: 265

PRIMARY-EXAMINER: Tokar; Michael J.

ASSISTANT-EXAMINER: O'Shea; Kevin D.

ATTY-AGENT-FIRM: Krauss; Geoffrey H. Davis, Jr.; James C. Snyder; Marvin

ABSTRACT:

A method for providing plural coaxial cable connections, each to a different portion of a single radio-frequency (RF) antenna without requiring the use of isolation means at any RF connection, determines at least a point within the antenna having a desired common potential adjacent to each of the different portions to which one of the coaxial cable connections is to be made; Then forms a separate segment of each different portion which is located substantially at the common potential and is reactively separated from adjacent segments of the associated portion; and connects a shield conductor of an associated coaxial cable to the separate segment, while connecting a center conductor of that same associated coaxial cable to a selected one of the adjacent segments of that different portion.

20 Claims, 6 Drawing figures

Full Title Citation Front Review Classification	Date: Reference	Elims Rolle Urave V.
☐ 4. Document ID: US 6930480 B1	Relevance Rank: 72	
L3: Entry 9 of 19	File: USPT	Aug 16, 2005

US-PAT-NO: 6930480

DOCUMENT-IDENTIFIER: US 6930480 B1

TITLE: Head coil arrays for parallel imaging in magnetic resonance imaging

DATE-ISSUED: August 16, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Fujita; Hiroyuki	Highland Heights	ОН			
Petropoulos; Labros S.	Solon	ОН			
Zou; Mark Xueming	Aurora	ОН			
Chan; Pei H.	Aurora	ОН			
Chu; Dashen	Hudson	ОН			•
Murphy-Boesch; Joseph	Aurora	ОН			•

Record List Display Page 7 of 37

Porter et al A 16-Element Phased-Array Head Coil MRM 40: 272-279, 1998. "Simultaneous Acquisition of Spatial Harmonics (SMASH): Fast Imaging with Radiofrequency Coil Arrays," Daniel K. Sodickson and Warren J. Manning, Magnetic Resonance in Medicine 38:591-603 (1997).

"SENSE: Sensitivity Encoding for Fast MRI," Klaas P. Pruessmann, et al., Magnetic Resonance in Medicine 42:952-962 (1999).

"A multicoil array designed for cardiac SMASH imaging," Mark A. Griswold, et al., <u>Magnetic Resonance</u> Materials in Physics, Biology and Medicine 10 (2000) 105-113. "SMASH imaging with an eight element multiplexed RF coil array," James A. Bankson, et al., <u>Magnetic Resonance</u> Materials in Physics, Biology and Medicine 10 (2000) 93-104.

"An array that exploits phase for SENSE imaging," Joseph V. Hajnal, et al., International Society for <u>Magnetic Resonance</u> in Medicine, 8.sup.th Scientific Meeting & Exhibition, Proceedings, 1719, (2000).

"A 4 channel head coil for SENSE imaging," D. J. Herlihy, et al., International Society for Magnetic Resonance in Medicine, 8.sup.th Scientific Meeting & Exhibition, Proceedings, 1394, (2000).

"Planar Strip Array (PSA) for \underline{MRI} ," Ray F. Lee, et al., $\underline{Magnetic\ Resonance}$ in Medicine 45:673-683 (2001).

"Concentric Coil Arrays for Spatial Encoding in Parallel MRI," Michael A. Ohliger, et al., International Society for Magnetic Resonance in Medicine, 9.sup.th Scientific Meeting & Exhibition, Proceedings, 21, (2001).

"Specific Coil Design for SENSE: A Six-Element Cardiac Array," Markus Weiger, et al., Magnetic Resonance in Medicine 45:495-504 (2001).

"SMASH and Sense: Experimental and Numerical Comparisons," Bruno Madore and Norbert J. Pelc, <u>Magnetic Resonance</u> in Medicine 45:1103-1111 (2001).

"An efficent, highly homogeneous radiofrequency coil for whole-body NMR imaginingg at 1.5T," Cecil E. Hayes, et al., Journal of Magnetic Resonance 63:622-628 (1985). "A Four Channel Transceive Phased Array Head Coil for 3T," Scott B. King et al., International Society for Magnetic Resonance in Medicine, 9.sup.th Scientific Meeting & Exhibition, Proceedings, 12, (2001).

ART-UNIT: 2859

PRIMARY-EXAMINER: Shrivastav; Brij B.

ATTY-AGENT-FIRM: Della Penna; Michael A. Armstrong Teasdale LLP

ABSTRACT:

A partially parallel acquisition RF coil array for imaging a human head includes at least a first, a second and a third loop coil adapted to be arranged circumambiently about the lower portion of the head; and at least a forth, a fifth and a sixth coil adapted to be conformably arranged about the summit of the head. A partially parallel acquisition RF coil array for imaging a human head includes at least a first, a second, a third and a fourth loop coil adapted to be arranged circumambiently about the lower portion of the head; and at least a first and a second Figure-8 or saddle coil adapted to be conformably arranged about the summit of the head.

20 Claims, 25 Drawing figures

HEAVIER HTG	lle:: Citation Front Review Classification Date	Reference: Claims III Coloii III of sould
***************************************		***************************************
□ 5.	Document ID: US 20040236209 A1	Relevance Rank: 72

Record List Display Page 9 of 37

during a receive cycle thereof and decouple it from the port during a transmit cycle thereof. With its balloon inserted and inflated within a cavity of a patient, the probe allows the MR system to generate images and/or spectra of the region of interest using the MR signals received by the loop.

CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This application claims the benefit of U.S. Provisional Applications 60/429,257 and 60/381,727, titled System And Method Of Obtaining Images And Spectra Of Intracavity Structures Using 3.0 Tesla Magnetic Resonance Systems and 3.0 Tesla Endorectal Coil And Interface For Single Receiver And Phased Array MR Scanning Of The Prostate And Other Pelvic Anatomy, respectively, filed on Nov. 26, 2002, and May 16, 2002, respectively. These provisional applications have been assigned to the assignee of the invention disclosed below, and their teachings are incorporated into this document by reference.

Full Titl	≘ Citation Front Review Classification	Date Kererence Dequences Attachments Chaims Kildo Draw Dr
□ 6.	Document ID: US 6975115 B1	Relevance Rank: 72
	200mm 12. 00 03 / 01 10 21	Total various realists. 72

File: USPT

Dec 13, 2005

US-PAT-NO: 6975115

L3: Entry 8 of 19

DOCUMENT-IDENTIFIER: US 6975115 B1

TITLE: Coil arrays for parallel imaging in magnetic resonance imaging

DATE-ISSUED: December 13, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Fujita; Hiroyuki	Highland Heights	ОН			
Chan; Pei H.	Aurora	ОН			
Chu; Dashen	Hudson	ОН			
Murphy-Boesch; Joseph	Aurora	ОН			
Petropoulos; Labros S.	Solon	ОН			
Zou; Mark Xueming	Aurora	OH			

ASSIGNEE-INFORMATION:

STATE ZIP CODE COUNTRY TYPE CODE

GE Medical Systems Global Technology Waukesha WI 02

Company, LLC

APPL-NO: 10/164664

[PALM] DATE FILED: June 7, 2002

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION This application claims the benefit of U.S. provisional patent application Ser. No. 60/296,885 filed Jun. 8, 2001.

INT-CL-ISSUED: [07] G01V 3/00

Record List Display Page 11 of 37

ART-UNIT: 2859

PRIMARY-EXAMINER: Shrivastav; Brij B.

ATTY-AGENT-FIRM: Horton, Esq.; Carl B. Armstrong Teasdale LLP

ABSTRACT:

A partially parallel acquisition RF coil array for imaging a sample includes at least a first, a second and a third coil adapted to be arranged circumambiently about the sample and to provide both contrast data and spatial phase encoding data.

20 Claims, 21 Drawing figures

FOUR PILE GREEF FORT Review Distriction Date Referred Comme Rose Porto

☐ 7. Document ID: US 5280248 A Relevance Rank: 71

L3: Entry 15 of 19

File: USPT

Jan 18, 1994

US-PAT-NO: 5280248

DOCUMENT-IDENTIFIER: US 5280248 A

TITLE: Biplanar RF coil for magnetic resonance imaging systems

DATE-ISSUED: January 18, 1994

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Zou; Xueming Willoughby OH
Patrick; John L. Chagrin Falls OH
Mastandrea; Nicholas J. Bedford Hts. OH

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Picker International, Inc. Highland Hts. OH 02

APPL-NO: 07/919215 [PALM]
DATE FILED: July 24, 1992

INT-CL-ISSUED: [05] G01V 3/00

INT-CL-CURRENT:

TYPE IPC DATE

CIPS G01 R 33/38 20060101

CIPN G01 R 33/422 20060101

CIPN G01 R 33/28 20060101

CIPS G01 R 33/385 20060101

CIPS G01 R 33/34 20060101

Record List Display Page 13 of 37

signals to the quadrature biplanar coil assembly. A digital receiver (140) receives and demodulates radio frequency signals from the quadrature coil assembly. The demodulated signals are reconstructed (144) into an image representation for display on a video monitor (146).

16 Claims, 5 Drawing figures

Full Title Citation Front Review Classification Date Reference

Claims 1004C Drave De

□ 8. Document ID: US 4691163 A Relevance Rank: 69

L3: Entry 17 of 19

File: USPT

Sep 1, 1987

US-PAT-NO: 4691163

DOCUMENT-IDENTIFIER: US 4691163 A

TITLE: Dual frequency surface probes

DATE-ISSUED: September 1, 1987

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Blass; Judd Haifa IL
Keren; Hanan Haifa IL

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Elscint Ltd. Haifa IL 03

APPL-NO: 06/713689 [PALM]
DATE FILED: March 19, 1985

INT-CL-ISSUED: [04] G01R 33/08

INT-CL-CURRENT:

TYPE IPC DATE

CIPS G01 R 33/32 20060101

CIPS <u>G01</u> <u>R</u> <u>33/36</u> 20060101

CIPS G01 R 33/34 20060101

CIPS G01 R 33/341 20060101

US-CL-ISSUED: 324/318; 324/309, 128/653 US-CL-CURRENT: 324/318; 324/309, 600/422

FIELD-OF-CLASSIFICATION-SEARCH: 324/307, 324/309-310, 324/313, 324/318, 324/322,

128/653

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4075552	February 1978	Troficante et al.	324/322
4446431	May 1984	McKay	324/322
4450408	May 1984	Tiemann ·	324/322 X

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO PUBN-DATE COUNTRY CLASS 1073652 February 1984 SU 324/307

ART-UNIT: 265

PRIMARY-EXAMINER: Tokar; Michael J.

ASSISTANT-EXAMINER: Jaworski; Francis J.

ATTY-AGENT-FIRM: Sandler & Greenblum

ABSTRACT:

A radio frequency surface probe for data acquisition in <u>magnetic resonance</u> systems. The probe is comprised of a plurality of inductors connected together with tuning capacitors in a balanced configuration. The configuration enables the probe to be impedance matched and to resonate at two separate frequencies without having to be tuned between frequency settings and without being effected by the impedance variations that are caused by the different samples or patients.

14 Claims, 9 Drawing figures

Full Title Citation Front Review Classification Date	Reference:	Claims KMC DraweDe
☐ 9. Document ID: US 20030183410 A1	Relevance Rank: 68	
L3: Entry 5 of 19	File: PGPB	Oct 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030183410

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030183410 A1

TITLE: Superconducting cable

PUBLICATION-DATE: October 2, 2003

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY

Aug 11, 2005

Sinha, Uday K.	Carrollton	GA	US
Hughey, Raburn L.	Franklin	GA	US
Tolbert, Jerry	Newnan	GA	US
Gouge, Michael J.	Oak Ridge	TN	US
Lue, J.W.	Oak Ridge	TN	US

APPL-NO: 10/363008 [PALM] DATE FILED: June 9, 2003

PCT-DATA:

DATE-FILED APPL-NO PUB-NO PUB-DATE 371-DATE 102(E)-DATE

Sep 14, 2001 PCT/US01/28630

INT-CL-PUBLISHED: [07] H01B 1/00, H02G 1/00

INT-CL-CURRENT:

TYPE IPC DATE
CIPS <u>H01</u> <u>B</u> <u>12/06</u> 20060101
CIPN <u>H01</u> <u>B</u> <u>7/04</u> 20060101

US-CL-PUBLISHED: 174/68.1 US-CL-CURRENT: <u>174/68.1</u>

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

On order to provide a flexible oxide superconducting cable which is reduced in AC loss, tape-shaped superconducting wires covered with a stabilizing metal are wound on a flexible former. The superconducting wires are preferably laid on the former at a bending strain of not more than 0.2%. In laying on the former, a number of type-shaped superconducting wires are laid on a core member in a side-by-side manner, to form a first layer. A prescribed number of tape-shaped superconducting wires are laid on top of the first layer in a side-by-side manner, to form a second layer. The former may be made of a metal, plastic, reinforced plastic, polymer, or a composite and provides flexibility to the superconducting wires and the cable formed therewith.

Full	Title	Citation Front F	eview Classifivation Date:	Reference: Sequences: Attachments: Claims KWC Diagrib
	10.	Document ID:	US 20050173149 A1	Relevance Rank: 68

File: PGPB

PGPUB-DOCUMENT-NUMBER: 20050173149

PGPUB-FILING-TYPE: new

L3: Entry 2 of 19

DOCUMENT-IDENTIFIER: US 20050173149 A1

TITLE: Triaxial superconducting cable and termination therefor

Record List Display Page 17 of 37

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims Diffic Draw D

☐ 11. Document ID: US 2896148 A Relevance Rank: 68

L3: Entry 19 of 19

File: USOC

Jul 21, 1959

US-PAT-NO: 2896148

DOCUMENT-IDENTIFIER: US 2896148 A

TITLE: Generator regulated power supply equipment

DATE-ISSUED: July 21, 1959

INT-CL-CURRENT:

TYPE IPC DATE

CIPS <u>H04</u> <u>B</u> <u>3/44</u> 20060101 CIPS <u>H04</u> <u>B</u> <u>3/02</u> 20060101

US-CL-CURRENT: 322/24; 322/64, 322/73, 327/540

DOCUMENT TEXT:

July 21, 1959 V. J. TERRY E-i AL 2,896,148 GENERATOR REGULATED FOWER SUFPLY EQUIPL.IENT Filed Nov. 1, 1954 4 Sheets@Sheet I 7 @CC2@ A'113 GAI c 6A +0- 4uto BI + -- OF C/ S4 -0 r Sif,/f 4S 1,82 Stw7,s- ,A -oc4 - 0 0< Inventors V J. TERRY- R. KE LL Y- P S,KELLY-W.QCRAGG By p4+ Attorney

July'21, 1959 V. J. TERRY' ET AL 2,896,148 GENERATOR REGULATEB POWER SUPPLY EQUIPMENT Fil,ed Nov. 1, 1954 4 She6ts-Sheet 2 2 T DCI 7 IOSD @/#C zc //C Y/,C/@IC2 c &2 PC T R42 ICI ,IC2 R44 Rild R45 --ANVOA'-- In ve nt or s VJ. TE RRY- R. K ELLY- PS KELLY-'W OCRAGG A t t o r n e y

July 21, 1959 V. J. TERRY E AL 2,896,148 GENERATOR REGULATED POWER SUPPLY EQUIFMENT 4 She ets- She et 3 Filed Nov. 1, 1954 2 V2 .'VOV- V 200 V 180 160 @io 120 Ilel @o ?xl@ ,Eb = 80 /0 co 0 0 4 x 30 90 /0 @l@e slpength I'n Oauss - - S117 017trOlWd 'gle C g - l-@19 r Dou6le Conllvl wo'ys #t&k C017@,VIIL-d hy 1117e cillrent - 2100 7' 9. s4,,oDlli,,olwlth constant wrpentf @io at 1746;n,4. DoLlhi- Control wogs - -/00 Wd 'g. as heklr - 21.@o 7- Wolq as he@'" - 800 7'4yt 0 2@5 26i7-S 2?g 212- 1 Z/@e ,,PL-nt - m Inventors V R Ry@ .,t TE - R.KELLY - PS. KELLY- W-D- CRAGG A t t o r n e y

July 21, 1959 V. J. TERRY ET AL 21896,148 DENERATOR REGULATED POWER SUPPLY EQUIPMENT Filed Nov. 1, 1954 4 thoets-Sheet 4 pp Phi ,D,D Fl@. 7 -Y N S N Fl@. g A/ N IV Fl /0 BB /V v q. N N 2 s inventorz V J. TE RRY. R. KELLY- P S. KE LLY- W. D.CRAGG By(? Attorney

2 @ 8 9 6 7 1 4 8 United States Patent Office Patented July 21, 1959 2,896,148 GENERATOR REGULATED POWER SUPPLY EQUIPMENT 5 Victor John Terry, Richard Kelly, Patrick Stanley Kelly, and William Donald Cragg, London, England, assign—ors to International Standard Electric Corpokation, New York, N.Y. Application November 1, 1954, Serial No. 466,172 10 Claims priority, application Great Brittin November 3, 1953 3 Claims. (Cl. 322-24) 15 This invention relates to regulated electric power supply equipment. According to the invention, there is provided regulated electric power supply equipment which comprises mag—netically-controlled means for regulating the supply of 20 power from the said equipment to a load, a

Record List Display Page 24 of 37

☐ 12. Document ID: US 6469636 B1 Relevance Rank: 68

L3: Entry 12 of 19 File: USPT Oct 22, 2002

US-PAT-NO: 6469636

DOCUMENT-IDENTIFIER: US 6469636 B1

TITLE: High-power well logging method and apparatus

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Baird; Gary K. Richmond TX

Dodge; Carl Houston TX

Henderson; Thomas E. Katy TX

Velasquez; Francisco Katy TX

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Halliburton Energy Services, Inc. Houston TX 02

APPL-NO: 09/437594 [PALM]
DATE FILED: November 10, 1999

PARENT-CASE:

"This application is a continuation of provisional application No. 60/110,560 filed Dec. 2, 1998 and provisional application No. 60/153,163 filed Sep. 9, 1999."

INT-CL-ISSUED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE IPC . DATE

CIPS <u>G01</u> <u>V</u> <u>11/00</u> 20060101 CIPS <u>E21</u> <u>B</u> <u>47/12</u> 20060101

CIPS <u>E21</u> <u>B</u> <u>41/00</u> 20060101

US-CL-ISSUED: 340/854.9; 340/853.1, 166/66, 333/17.2, 333/243 US-CL-CURRENT: 340/854.9; 166/66, 333/17.2, 333/243, 340/853.1

FIELD-OF-CLASSIFICATION-SEARCH: 340/853.7, 340/853.1, 340/854.9, 340/854.7, 340/855.2, 166/66, 250/253, 250/263, 333/17.2, 333/243, 324/539 See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO ISSUE-DATE PATENTEE-NAME US-CL 4399400 August 1983 Rockwell et al. 324/51 Record List Display Page 25 of 37

4523804	June 1985	Thompson	350/96.23
4578645	March 1986	Hoehn, Jr.	324/338
<u>4583093</u>	April 1986	Beals	340/857
<u>4723054</u>	February 1988	Billet	174/74R
4841259	June 1989	Mayer	333/17.2
4891641	January 1990	Gard et al.	340/857
<u>5140318</u>	August 1992	Stiner	340/854.8
5483232	January 1996	Clark, Jr. et al.	340/853.1
5495547	February 1996	Rafie et al.	385/101
5504479	April 1996	Doyle et al.	340/854.9

ART-UNIT: 2735

PRIMARY-EXAMINER: Horabik; Michael

ASSISTANT-EXAMINER: Wong; Albert K.

ATTY-AGENT-FIRM: Conley, Rose & Tayon, P.C.

ABSTRACT:

A system and method is described for safely and economically providing up to 1800 watts to downhole equipment over existing logging cables. In one embodiment, the system includes a standard multiconductor logging cable which supports orthogonal signal transmission modes on circumferentially spaced insulated conductors. A highpower power source on the surface is coupled to the insulated conductors in the cable to drive a power signal on the lowest impedance signal transmission mode. Bearing in mind that high-power electrical currents can present a safety hazard, system safety may be enhanced by the addition of a reliable current imbalance detector configured to shut down all power sources when currents in the insulated conductors don't add up to zero. The system may further include multiple power sources operating on different independent signal transmission modes, and may also include multiple telemetry channels which share the power transmission modes via frequency multiplexing. The system may also deliver computer-regulated downhole power voltages, and the computer may be further configured to customize signal waveforms and power allocation on the various independent signal transmission modes to maximize the power capacity of the logging cable subject to its maximum voltage rating.

10 Claims, 9 Drawing figures

Full Titl	ខ Citation Front Review Classification	Dateii Reference	Claims KNC Oraci Da
□ 13.	Document ID: US 6914538 B2	Relevance Rank: 68	
L3: Entr	y 10 of 19	File: USPT	Jul 5, 2005

US-PAT-NO: 6914538

DOCUMENT-IDENTIFIER: US 6914538 B2

Record List Display Page 27 of 37

4841259	June 1989	Mayer	
4891641	January 1990	Gard et al.	
5140318	August 1992	Stiner	
5483232	January 1996	Clark, Jr. et al.	
5495547	February 1996	Rafie et al.	
5504479	April 1996	Doyle et al.	
6469636	October 2002	Baird et al.	340/854.9

OTHER PUBLICATIONS

Supplementary Partial European Search Report for European Patent Application No. EP 99 96 5006, dated Apr. 10, 2003, 2 p. PCT Search Report dated Apr. 4, 2000 (9 p.) for PCT Application Serial No. PCT/US99/27417 filed Nov. 19, 1999.

ART-UNIT: 2635

PRIMARY-EXAMINER: Wong; Albert K.

ATTY-AGENT-FIRM: Conley Rose, P.C.

ABSTRACT:

A system and method for downhole power delivery. In one embodiment, the system delivers computer-regulated downhole power voltages, and may be configured to customize signal waveforms and power allocation on the various independent signal transmission modes to maximize the power capacity of the logging cable subject to its maximum voltage rating. In one embodiment, the system includes a standard multiconductor logging cable which supports orthogonal signal transmission modes on circumferentially spaced insulated conductors. A high-power power source on the surface is coupled to the insulated conductors in the cable to drive a power signal on the lowest impedance signal transmission mode. The system may further include multiple power sources operating on different independent signal transmission modes, and may also include multiple telemetry channels which share the power transmission modes via frequency multiplexing.

18 Claims, 9 Drawing figures

Full: Title: Citation Front Review.	Classification (Clate) Reference	Clains KMC Draw De
□ 14. Document ID: US 20	0030085816 A1 Relevance Rank: 68	· · · · · · · · · · · · · · · · · · ·
L3: Entry 6 of 19	File: PGPB	May 8, 2003

PGPUB-DOCUMENT-NUMBER: 20030085816

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030085816 A1

TITLE: High-power well logging method and apparatus

PUBLICATION-DATE: May 8, 2003

Record List Display Page 29 of 37

Full Title Citation Front Review Classification Date Reference Sequences Attachments Chaims Date Draw D

☐ 15. Document ID: US 20060164089 A1 Relevance Rank: 67

L3: Entry 1 of 19 File: PGPB Jul 27, 2006

PGPUB-DOCUMENT-NUMBER: 20060164089

PGPUB-FILING-TYPE:

DOCUMENT-IDENTIFIER: US 20060164089 A1

TITLE: Magnetic resonance imaging receive circuit

PUBLICATION-DATE: July 27, 2006

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY

Gross; Patrick London GB

APPL-NO: 10/511957 [PALM]
DATE FILED: April 29, 2003

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO DOC-ID APPL-DATE

GB 0209756.6 2002GB-0209756.6 April 29, 2002

PCT-DATA:

DATE-FILED APPL-NO PUB-NO PUB-DATE 371-DATE

Apr 29, 2003 PCT/GB03/01892 Jul 19, 2005

INT-CL-PUBLISHED:

TYPE IPC DATE IPC-OLD

IPCP G01V3/00 20060101 G01V003/00

INT-CL-CURRENT:

TYPE IPC DATE
CIPP <u>G01 V 3/00</u> 20060101

US-CL-PUBLISHED: 324/322 US-CL-CURRENT: 324/322

ABSTRACT:

A <u>magnetic resonance</u> imaging receive circuit, for use e.g. within the body of a patient during an MR imaging procedure, includes a balanced MR coil (50) connected to balanced matching and decoupling circuitry (110, 120). Signal transfer passes along two micro-coaxial cables (52, 54) to signal combination circuitry (300) with common mode rejection. Signals then pass along a further coaxial cable (82), to a receiver. The coil (50) may be incorporated into an endoscope or catheter probe, so providing detailed MR imaging of the treatment area.

Record List Display

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims MMC Drave D.

☐ 16. Document ID: US 6002256 A Relevance Rank: 65

L3: Entry 14 of 19 File: USPT Dec 14, 1999

US-PAT-NO: 6002256

DOCUMENT-IDENTIFIER: US 6002256 A

TITLE: RF magnetic field pulse generator

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Slade; Robert Andrew Oxon GB

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

Oxford Instruments (UK) Ltd. Oxford GB 03

APPL-NO: 08/860234 [PALM] DATE FILED: June 3, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO APPL-DATE

GB 9520357 October 5, 1995

PCT-DATA:

APPL-NO DATE-FILED PUB-NO PUB-DATE 371-DATE
PCT/GB96/02427 October 3, 1996 W097/13159 Apr 10, 1997 Jun 3, 1997

INT-CL-ISSUED: [06] G01V 3/02

INT-CL-CURRENT:

TYPE IPC DATE
CIPS G01 R 33/36 20060101
CIPS G01 R 33/32 20060101

US-CL-ISSUED: 324/322; 324/318, 324/320 US-CL-CURRENT: 324/322; 324/318, 324/320

FIELD-OF-CLASSIFICATION-SEARCH: 324/300-319, 324/320-322, 315/501, 128/653, 323/282

See application file for complete search history.

PRIOR-ART-DISCLOSED:

Record List Display Page 32 of 37

☐ 17. Document ID: US 20060164089 A1, WO 2003093851 A1, AU 2003233874 A1, EP 1499907 A1 Relevance Rank: 63

L3: Entry 18 of 19 File: DWPI Jul 27, 2006

DERWENT-ACC-NO: 2003-903723

DERWENT-WEEK: 200650

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TITLE: Magnetic resonance image receive circuit for medical diagnosis, has cables

transmitting control to decoupling circuitry and differential signals to one portion when circuit is in decoupled mode and receive mode, respectively

INVENTOR: GROSS, P

PATENT-ASSIGNEE: IMPERIAL COLLEGE INNOVATIONS LTD (IMCON), IMPERIAL COLLEGE

INNOVATIONS LTD (UNLO), GROSS P (GROSI)

PRIORITY-DATA: 2002GB-0009756 (April 29, 2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20060164089 A1	July 27, 2006		000	G01V003/00
WO 2003093851 A1	November 13, 2003	E	023	G01R033/28
AU 2003233874 A1	November 17, 2003		000	G01R033/28
EP 1499907 A1	January 26, 2005	E	000	G01R033/28

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW AL AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO .	DESCRIPTOR
US20060164089A1	April 29, 2003	2003WO-GB01892	
US20060164089A1	July 19, 2005	2005US-0511957	
WO2003093851A1	April 29, 2003	2003WO-GB01892	
AU2003233874A1	April 29, 2003	2003AU-0233874	
AU2003233874A1		WO2003093851	Based on
EP 1499907A1	April 29, 2003	2003EP-0727636	
EP 1499907A1	April 29, 2003	2003WO-GB01892	
EP 1499907A1		WO2003093851	Based on

INT-CL (IPC): G01R 33/28; G01R 33/36; G01V 3/00

ABSTRACTED-PUB-NO: WO2003093851A

BASIC-ABSTRACT:

NOVELTY - The circuit has two portions (200, 300) one with a decoupling circuitry

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adjacent to an antenna (50) and another with a control circuitry causing the decoupling circuitry to switch the circuit between receive and decoupled modes. <u>Balanced cables</u> (82) transmitting a DC control to the decoupling circuitry and differential signals to the latter portion when the circuit is in the decoupled mode and the receive mode, respectively.

USE - Used in medical diagnosis.

ADVANTAGE - The cables can be easy swapped, and circuit is capable of being operated safely even when large DC voltage is present on the line. The antenna and the matching circuitry experiences only one voltage. One portion of the circuit has matching circuitry that provides complete impedance between the antenna and the cables, hence cable-length becomes immaterial.

DESCRIPTION OF DRAWING(S) - The drawing shows the $\underline{\text{magnetic resonance}}$ imaging receive circuit.

RF antenna 50

Coaxial cable (100, 300) Portions 82

Transmission line 200

Matching section 310

ABSTRACTED-PUB-NO: WO2003093851A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.4/6

DERWENT-CLASS: S01 W02

EPI-CODES: S01-E01; S01-E02A; W02-B08D1; W02-B08E1; W02-B10;

. Full Title Citation Front Review Classification	Date Reference	Elaims INNC Urase b
☐ 18. Document ID: US 6061589 A	Relevance Rank: 63	
L3: Entry 13 of 19	File: USPT	May 9, 2000

US-PAT-NO: 6061589

DOCUMENT-IDENTIFIER: US 6061589 A

** See image for Certificate of Correction **

TITLE: Microwave antenna for cancer detection system

DATE-ISSUED: May 9, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Bridges; Jack E. Park Ridge IL Taflov; Allen Wilmette IL Hagness; Susan C. Chicago IL

Record List Display Page 35 of 37

ATTY-AGENT-FIRM: McEachran, Jambor, Keating, Bock & Kurtz

ABSTRACT:

A microwave antenna for use in a system for detecting an incipient tumor in living tissue such as that of a human breast in accordance with differences in relative dielectric characteristics. In the system a generator produces a non-ionizing electromagnetic input wave of preselected frequency, usually exceeding three gigahertz, and that input wave is used to irradiate a discrete volume in the living tissue with a non-ionizing electromagnetic wave. The illumination location is shifted in a predetermined scanning pattern. Scattered signal returns from the living tissue are collected and processed to segregate skin tissue scatter and to develop a segregated backscatter or return wave signal; that segregated signal, in turn, is employed to detect any anomaly indicative of the presence of a tumor or other abnormality in the scanned living tissue. The present invention is directed to a composite Maltese Cross or bow-tie antenna construction employed to irradiate the living tissue and to collect backscatter or other scatter returns.

13 Claims, 28 Drawing figures

Full	Title	Citation Front Review Classification Date F	Grins Hade Hoekey
	19.	Document ID: US 20050100866 A1	Relevance Rank: 63

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050100866

PGPUB-FILING-TYPE: new

L3: Entry 3 of 19

DOCUMENT-IDENTIFIER: US 20050100866 A1

TITLE: Radiation probe and detecting tooth decay

PUBLICATION-DATE: May 12, 2005

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY
Arnone, Donald Dominic Cambridge GB
Cibsla, Craig Michael Cambridge GB

ASSIGNEE-INFORMATION:

NAME CITY STATE COUNTRY TYPE CODE

TeraView Limited 03

APPL-NO: 11/011703 [PALM]
DATE FILED: December 14, 2004

FOREIGN-APPL-PRIORITY-DATA:

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GB 9917407.0 1999GB-9917407.0 July 23, 1999

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INT-CL-PUBLISHED: [07] A61C 5/00, A61C 3/00, A61B 5/00

INT-CL-CURRENT:

TYPE IPC DATE CIPN A61 B 1/04 20060101 CIPS <u>A61</u> <u>B</u> <u>6/14</u> 20060101 CIPS G01 N 21/59 20060101 CIPS A61 B 5/00 20060101 CIPS G01 N 21/49 20060101 CIPS G01 N 21/31 20060101 CIPS G01 N 21/35 20060101 CIPS. G01 N 21/47 20060101

US-CL-PUBLISHED: 433/215; 433/029, 600/340 US-CL-CURRENT: 433/215; 433/29, 600/340

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A probe assembly for examining a sample (1), the assembly comprising a probe (13), communication means (9, 11) for communicating signals to and/or from the probe (13), an emitter (9) for emitting radiation to irradiate the sample (1) and an electro-magnetic radiation detector (13) for detecting radiation which is transmitted or reflected from the sample (1). The emitter (9) comprises a frequency conversion member which emits radiation in response to being irradiated with input radiation which has a different frequency to that of the emitted radiation. At least one of the emitter or detector is located in the probe. The probe is particularly for use as an endoscope or for imaging teeth. The invention also extends to a method of imaging teeth, and apparatus for imaging diseased teeth, for example, teeth with caries or suffering from periodontal disease.

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